

## **WHAT IS CLAIMED IS:**

1. An image processing apparatus comprising:  
a first information addition unit to add, to image data, information related to image processing of the image data according to a first addition method as first information; and  
a second information addition unit to add the information to the image data according to a second addition method different from the first information addition method as second information, wherein at least one of the first and the second information added is not lost even when an image processing is performed with respect to the image data.
2. The image processing apparatus according to claim 1, wherein  
the first information addition unit adds the information to the image data as a tag, and  
the second information addition unit embeds the information in the image data as an electronic watermark.
3. The image processing apparatus according to claim 1, wherein  
the first information addition unit adds the information to the image data as a tag, and  
the second information addition unit embeds the information in the image data as a specific pattern.

4. An image processing apparatus comprising:

a first information extractor to extract, from image data, information related to image processing of the image data according to a first extraction method;

a second information extractor to extract the information from the image data according to a second extraction method different from the first extraction method, when the information cannot be extracted by the first information extractor; and

an image processing unit to perform the image processing based on the information extracted by one of the first information extractor and the second information extractor.

5. The image processing apparatus according to claim 4, wherein

the first information extractor is operable to extract the information from a tag that has been added to the image data, and

the second information extractor is operable to extract the information from an electronic watermark that has been embedded in the image data.

6. The image processing apparatus according to claim 4, wherein

the first information extractor is operable to extract the information from a tag that has been added to the image data, and

the second information extractor is operable to extract the information from a specific pattern that has been added to the image data.

7. The image processing apparatus according to claim 4, wherein the image processing unit is operable to perform a predetermined image processing with respect to the image data when the information cannot be extracted by the first information extractor and the second information extractor.

8. The image processing apparatus according to claim 4, further comprising a third information extractor to extract image characteristics from the image data when the information cannot be extracted by the first information extractor and the second information extractor, wherein the image processing unit is operable to perform the image processing based on the image characteristics extracted.

9. An image processing method comprising:  
adding, to image data, information related to image processing of the image data according to a first addition method as first information; and  
adding the information to the image data according to a second addition method different from the first information addition method as second information,  
wherein at least one of the first and the second information added is not lost even when an image processing is performed with respect to the image data.

10. An image processing method comprising:

extracting, from image data, information related to image processing of the image data according to a first extraction method;

extracting the information from the image data according to a second extraction method different from the first extraction method, when the information cannot be extracted by the first extraction method; and

performing the image processing based on the information extracted.

11. An image processing system comprising an image input apparatus and an image output apparatus, wherein the image input apparatus includes:

a first information addition unit to add to image data information related to image processing of the image data according to a first addition method as first information; and

a second information addition unit to add the information to the image data according to a second addition method different from the first information addition method as second information, wherein at least one of the first and the second information added is not lost even when an image processing is performed with respect to the image data, and the image output apparatus includes:

a first information extractor to extract, from the image data, the information according to a first extraction method;

a second information extractor to extract the information from the image data according to a second extraction method different from the first extraction method, when the information cannot be extracted by the first

information extractor; and

an image processing unit to perform the image processing based on the information extracted by one of the first information extractor and the second information extractor.